April-12-13 7:36:17 AM Item ID: D2935 Accept *N900040100* Setup Start **Revision ID:** Saddle Spacer Item Name: Start Date: 5/24/13 **Cust Item ID:** Required Date: 5/24/13 **Customer:** Reference: Run Date: 1307-16 Tooling: **Approvals:** Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description Number Stamp Qty **Run Hours** Code Qty Draw Nbr **Revision Nbr** D2935 Rev B 100 0.00 FLOW WATER JET 24 0 *100* Waterjet 0.00 Memo FLOW CNC Waterjet 1-Cut as per Dwg/D2935 6061.080" Dwg Rev: Prog Rev: 2-Deburr if necessary 110 QC2- Inspect parts off machine FAI/FAIB 0.00 *110* QC 0.00 Memo Quality Control

120

QC8- Inspect parts - second check

120

QC

Memo

Quality Control

| | | | | | | | | | | | DQA: | Date: | <u></u> |
|--|--|---|----------|----------|----------|--|------|--|--|--|---|---|--|
| NCR: Y | 'es / | No | | | | WORK ORDER NON | -COI | NFOR | MANCE / UP | DATE | QA Closed: | Date: | |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST DI | EPARTMENT | /PROCESS | |
| Part N | lo | | | | | Rework Scrap Use-as-is Work Order Update | | Thern | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | Pro | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root Cause | | ate | Step | Qty | Desc | cription of work order update or Non-conformance | | Initial lief Eng | | tion ription | Sign & Date | Verification | QC Inspector |
| Ooc/Data quip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | |
| | | | | <u> </u> | | | FAUL | T CATE | GORY | | | | |
| Landir | ng Gea | r nding | | | Г | General Bend | | Grain | | | Ovalized | | Pressure/Forced |
| | Cer Cra Cru Cut Hea Ins | ntre No icks ished/C ffs at Trea pection oples in | Strip in | Tube | | BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing | | Hardwa Inspecti Instruct Mainte Mislabe Misread Offset | ion Incomplete ions Incomplete/ enance eled | Unclear | Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/ | ct sissing Vrong | Temperature/Cure Weld Wrong Stock Pulled |
| | | · | equence | | <u> </u> | Finish | | - | Sequence | | | | |

Outside Dimensions

Wave/Twist in Tube

Folio

April-12-13 7:36:17 AM

Item ID: D2935 Accept *N900040100* Setup Start **Revision 1D:** Item Name: Saddle Spacer Start Date: 5/24/13 Start Qty: 12.00 ; **Cust Item ID:** Required Date: 5/24/13 Req'd Qty: 12.00 **Customer:** Reference: Run Date: **Process Plan: Approvals:** Tooling: Date: QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Tool # Plan Reject Accept Reject Insp. **Work Center ID** Description Qty Number **Run Hours** Code **Qty** Stamp 130 Chemical Conversion Coat per QSI005 4.1 0.00 *130* HandFinish 0.00 Memo Hand Finishing 140 Inspect Part Finish QC Memo Quality Control 24x M.Ll. 13-05-31 Identify as per dwg & Stock Location: 57022 150 *150* Packaging 0.00 Memo Packaging

| NCD: V- | - / 1 | | | WORK ORDER NON | CONFO | DAANCE / III | DATE | DQA: | Date: | Ý. |
|--|--------|------|-----|---|----------|--|---|------------|---|---------------------------|
| NCR: Yes | s / No | | | WORK ORDER NON | -CONFOR | RIVIAINCE / UI | PDATE | QA Closed: | Date: | |
| Work Order: | | | | DISPOSITION | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part No. | | | | Rework Scrap Use-as-is Work Order Update | | Skid-tube Machining rmoforming Large Fab | Crosstube Small Fab Finishing Composite | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | Description of work order update | Initial | А | ction | Sign & | | |
| Cause | Date | Step | Qty | or Non-conformance | Chief En | g Des | cription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training | | | | | | | | | | |

Landing Gear General Grain Ovalized Pressure/Forced Bending Bend BOM/Route Hardware Over/Under tolerance Temperature/Cure Centre Not Concentric to O/S Weld Broken/Damaged Part Incorrect Cracks Inspection Incomplete Crushed/Crimped Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Burrs Cuffs Part Moved Maintenance Contamination Heat Treat Countersink Positioned Wrong Mislabeled Power Loss/Surge Other Inspection Strip in Tube Cut Too Short Misread Offset **Drill Holes** Ripples in Bend Out of Calibration Torque Waves in Extrusion Drawing Finish Out of Sequence Turning Sequence

Outside Dimensions

FAULT CATEGORY

Wave/Twist in Tube

Folio

Unapproved

April-12-13 7:36:17 AM

Item ID: D2935 Accept *N900040100* Setup Start **Revision ID:** Saddle Spacer Item Name: **Start Date:** 5/24/13 **Start Qty:** 12.00 **Cust Item ID:** Required Date: 5/24/13 Req'd Qty: 12.00 **Customer:** Reference: Run Date: Tooling: Approvals: **Process Plan:** Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool # Plan Reject-Tool ID Accept Reject Work Center ID Description Code **Run Hours** Qty Qty Number Stame 160 QC21- Final Inspection - Work Order Release 0.00 *160* QC 0.00 Memo Quality Control

NCJ 13-05:

| | | | | | | | | | | | DQA: | Date: | , |
|--------------------------------|--------|---------|----------|----------|--------|--|-----|----------------------------|-------------------------|---|---------------------------|--------------|--------------------|
| NCR: | res / | No | | | | WORK ORDER NON-C | 100 | NFORM | MANCE / UPDATE | | QA Closed: | Date: | |
| Waste Oad | | | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | |
| Work Order: Part No. NCR No. | | | | | | Rework Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Work Order Update Large Fab Composite | | | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other | | |
| Root | | | | | Descri | ption of work order update | | nitial | Action | | Sign & | | |
| Cause | | ate | Step | Qty | , | or Non-conformance | Ch | ief Eng | Description | | Date | Verification | QC Inspector |
| Doc/Data | | | | - | | | | | | | | | |
| Equip/Tooling | | | | | | | ļ | | | | | | |
| Operator | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | |
| Process | П | | | | | | | | | | | • | |
| Supplier | | | | | | | | | | | | | |
| Training | | | | | ļ | | | | | | | | |
| Unapproved | | | | | | | | | | | | | |
| | | | | | | F. | AUL | T CATE | GORY | | | | |
| Landi | ng Gea | r | | | | General | | _ | | | _ | | - |
| | Bei | nding | | | | Bend | | Grain | | | Ovalized | | Pressure/Forced |
| | Cei | ntre No | t Concer | ntric to | O/S | BOM/Route | | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | Cra | icks | | | | Broken/Damaged | | Inspecti | on Incomplete | | Part Incorred | t | Weld |
| | Cru | ished/0 | Crimped | | | Burrs | | Instruct | ions Incomplete/Unclear | <u></u> | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Cut | ffs | | | | Contamination | | Mainte | nance | | Part Moved | | |
| | He | at Trea | t | | | Countersink | | Mislabe | led | | Positioned W | Vrong | |

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short Drill Holes

Drawing

Finish Folio

Picklist Print

April-12-13 7:36:21 AM

Work Order ID: 99798

99798

Parent Item:

D2935

D2935

Parent Item Name: Saddle Spacer

Start Date: 5/24/13

Required Date: 5/24/13

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP A00.06.06New IssueEC

IPP Rev:B Now 6061-T6 06-06-23 JLM

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|---------|
| M6061T6S.080 | | Purchased | No | | | 100 | sf | 206.5600 | 0.0507 | 0.640421 | | | ******* |
| *M6061T6 | S_080* | | | | , | | | | ** | 0.7 | 5 | Jm | 13·2-52 |

| Location | Loc Qty | Loc Code | |
|----------|------------|----------|--------|
| MAT021 | 206.560032 | | |
| 117285 | 0.497264 | | |
| 124786 | 206.062768 | | 124786 |

| NCR: | Yes | / | No |
|------|-----|---|----|

| | | | | | | | | | | | | DQA: | Date | 2: |
|---|--|------|------|-----|---|------|--|--|------------------------------------|---|---|--|--------------|---------------------------|
| NCR: | ⁄es | / No | | | | | WORK ORDER NON-C | | NFOR | MANCE / UPDATE | Q/ | A Closed: | Date | e: |
| Vork Ord | er: | | | | . * | | DISPOSITION | | | AGAINST [| EPA | RTMENT | /PROCESS | |
| Part No | | | | | | | Rework Scrap Use-as-is Work Order Update | | ١ | Skid-tube Crosstube Machining Small Fab noforming Finishing Large Fab Composite | Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier | | | Engineering Quality Other |
| Root | | | | | Des | crip | otion of work order update | | nitial | Action | | Sign & | | · |
| Cause | | Date | Step | Qty | | C | or Non-conformance | Ch | ief Eng | Description | | Date | Verification | QC Inspector |
| oc/Data puip/Tooling perator laterial etup ther rocess upplier raining | | | | . , | | | | | | | | | | |
| | | | | | | | | AUL | T CATE | GORY | | | | |
| Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion | | | | | General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing | | Instruct Mainte Mislabe Misread Offset | ion Incomplete tions Incomplete/Unclear enance eled | Ov Pa Pa Pa Po | valized ver/Under rt Incorred rt Lost/Mi rt Moved isitioned V wer Loss/ | issing | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other | | |
| | Torque Waves in Extrusion Turning Sequence | | | | | - | Finish | | Out of Calibration Out of Sequence | | | | | |

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| DART AEROSPACE LTD | Work Order: | 99798 |
|------------------------------|--------------|-------------|
| Description: Saddle Spacer | Part Number: | D2935 |
| Inspection Dwg: D2935 Rev: B | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

| X | First Article | Pro | ototype |
|---|---------------|-----|---------|
|---|---------------|-----|---------|

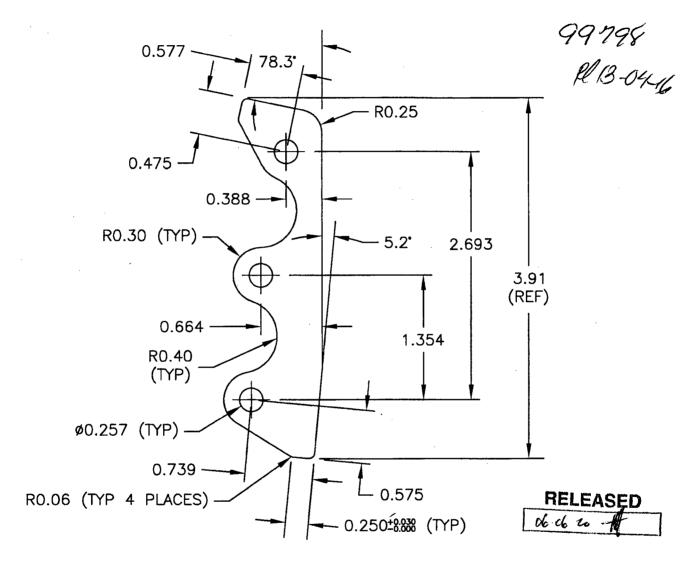
| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|----------------------|---------------|---------------------|--------|--------|-------------------------|----------|
| Ø0.257 | +0.006/-0.001 | 0.257" | - | | V | Jkm01 |
| 3.91 | +/-0.030 | 3.91" | - | | V | |
| 1.354 | +/-0.010 | 1.354" | - | | V | |
| 2.693 | +/-0.010 | 2,693' | - | | V | |
| 0.250 | +/-0.010 | 6.250 | _ | | ν | |
| R0.25 | +/-0.030 | 6,25 | - | | lG | |
| | | | - | | | |
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| Measured by: 🗔 | Audited by: | 27 | Prototype Approval: | N/A |
|----------------|-------------|--------|---------------------|-----|
| Date: 13-5-25 | Date: | 12 5 7 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|------------------|------------|----------|
| Α | 06.06.05 | New Issue | KJ/JLM | 1 |
| В | 06.06.23 | Dwg Rev. changed | KJ/JLM A | |
| | | | ! [] | 7,0.7 |



| | DESIGN DRAWN BY | | | DART AEROSPACE USA, INC. | |
|--|-----------------|------|----------|--------------------------|--------------|
| | CHECK | | APPROVED | DRAWING NO. | REV. B |
| | | PH | - Alt | D2935 | SHEET 1 OF 1 |
| | DATE | | - | TITLE | SCALE |
| | 06.0 | 5.29 | | SADDLE SPACER | 1:1 |
| | Α | | 99.11.02 | NEW ISSUE | |
| | В | | 06.05.29 | ADD 6061-T6 MATERIAL | |



NOTES:

1) MATERIAL:

6061-T6 (PER QQ-A-250/11 OR AMS 4025 OR AMS 4027) 0.080" THICK

(REF DART SPEC M6061T6S.080)

OR

5052-H32/H34 (PER QQ-A-250/8 OR AMS 4016) 0.080" THICK

(REF DART SPEC M5052H32S.080)

2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 5) ALL DIMENSIONS ARE IN INCHES

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